

# **STAFNE BONE CYST: A RARE INCIDENTAL FINDING**

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## **ABSTRACT**

Stafne bone cyst is an unusual depression most commonly located on the lingual surface of mandible. It is a well-defined corticated unilocular or occasionally lobulated radiolucency that ranges in diameter from 1 to 3 cm, located below the inferior alveolar canal and in between the first molar and the angle of mandible, in the region of the ante gonial notch and the submandibular gland fossa. The case report presents incidental finding of stefane bone cyst during routine advice of radiograph to determine the bone quality. The orthopantomography confirmed the presence of Stafne's bone cyst. Palpation of the defect was painless, and the patient displayed no pain or paraesthesia.

## **INTRODUCTION**

Stafne bone cyst also called as Stafne's idiopathic bone cavity or static bone cyst or developmental salivary gland defect is an unusual depression most commonly located on the lingual surface of mandible. It is a well-defined corticated unilocular or occasionally lobulated radiolucency that ranges in diameter from 1 to 3 cm, located below the inferior alveolar canal and in between the first molar and the angle of mandible, in the region of the ante gonial notch and the submandibular gland fossa [1]. Although the aetiology of this peculiar cyst is still obscure, many theories have been put forward regarding the emergence of mandibular concavities. It is considered to be a pseudocyst as the lesion lacks a cyst epithelial lining. It is hypothesized that during 5<sup>th</sup>- 8<sup>th</sup> week of embryological developmental stage of the mandible from Meckel's cartilage, the submandibular

gland tissue gets entrapped leading to the formation of an osseous concavity on the medial surface of the mandible [2-3]. Stafne bone cyst is uncommon and is usually detected incidentally.

### **CASE PRESENTATION**

A 60-year-old male patient was presented to the Department of Prosthodontics, MNR Dental College and Hospital for replacement of missing teeth. No significant medical and family history was presented by the patient. An orthopantomography was advised see the bone quality of the patient. An ovoid radiolucency with well-defined radiolucent margin was found in his left lower jaw near the angle of the mandible. Features such as size, border, location and margin were examined carefully. In particular, the lesion was located in the periapical area of 38, whose roots are intact without any resorption. The orthopantomography confirmed the presence of Stafne's bone cyst. Palpation of the defect was painless, and the patient displayed no pain or paraesthesia.

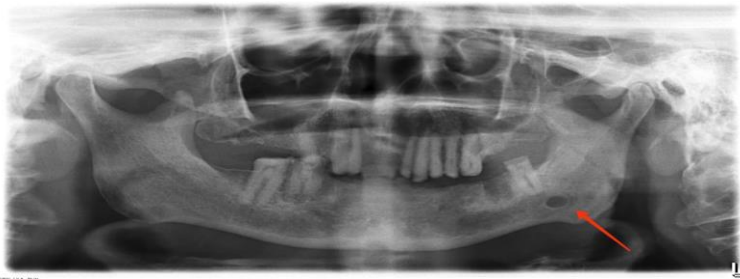


Figure 1 - Panoramic radiograph of classically described Stafne bone cyst of the left posterior mandible illustrates the well-defined unilocular radiolucency in the left posterior mandible between the inferior alveolar canal and the inferior border of the mandible



Figure 2: Intraoral photograph with no clinical findings

## **DISCUSSION**

Edward Stafne first described about Stafne bone cyst in 1942. He described it as radiolucent cavity, usually located unilaterally below the inferior alveolar canal and slightly above the inferior border of the mandible. But he did not analyse the contents of the cyst microscopically [4]. In most of the cases, Stafne's cyst is seen incidentally when patients report for other kinds of dental treatments. Pain, ulceration, bleeding are rarely features of Stafne bone cyst. It is most commonly seen in fifth to seventh decades of life and the rate of occurrence is extremely rare ranging from 0.10% to 0.48% [5].

Pathogenesis is still unknown. Although, the most commonly accepted theory is that during the ossification phase of the mandible, a part of the salivary gland gets entrapped due to the pressure exerted by these glands. Stafne's bone cyst has both anterior and posterior variants, where the posterior variant is a common entity located in the vicinity of the angle of mandible. Ameloblastoma, fibrous dysplasia, odontogenic cystic lesion, vascular malformations, basal cell nevus syndrome or metastasis of a primary tumor are differential diagnosis [6].

Since the patient was asymptomatic, periodic follow-up of the patient was carried out to observe any changes. During follow-up no significant changes were seen. Conservative approach is the more preferred [7-8]. Since, stafne bone cyst is a benign, asymptomatic, developmental bony defect with absence of any pathological changes, surgical intervention was not required.

## **CONCLUSION**

Stafne bone cyst is an unusual depression most commonly located on the lingual surface of mandible. The case report presents incidental finding of stefane bone cyst during routine advice of radiograph to determine the bone quality. The orthopantomography confirmed the presence of Stafne's bone cyst.

Since the defect was painless, and the patient displayed no pain or paraesthesia, conservative treatment based on periodic follow-ups was followed.

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